

WHAT IS CLAIMED IS:

1. An acoustic signal output apparatus comprising:
  - a speaker unit including a main converter having a first movable portion capable of moving along a predetermined axial line, for converting an electrical signal into mechanical vibration, a vibration plate attached to the first movable portion, for emitting sound waves to a front side of the main converter, and a frame fixed to the main converter, for vibratably supporting the vibration plate from the rear side thereof;
  - a compensation converter for converting an electrical signal to mechanical vibration, the compensation converter being fixed to a rear side of the main converter and having a second movable portion capable of moving along the predetermined axial line;
  - a compensation mass body attached to the second movable portion, for serving as a load of mechanical vibration of the compensation converter;
  - a signal source for generating an electrical signal corresponding to an acoustic signal to be outputted; and
  - a signal processing circuit for receiving an output of the signal source, amplifying or attenuating the output, and supplying the main converter and the compensation converter with respective electrical signals having such phases that the first movable portion and the second movable portion move in opposite directions.
2. The acoustic signal output apparatus of claim 1, wherein the signal processing circuit includes a first amplification circuit for amplifying a signal to be supplied to the main converter and a second amplification circuit for amplifying a signal to be supplied to the compensation converter, amplification factors of the first and second amplification circuits being determined in accordance with loads of mechanical vibration of the main converter and the compensation converter, respectively.
3. The acoustic signal output apparatus of claim 1, wherein the signal processing circuit comprises an amplification circuit for amplifying a signal to be supplied to the main converter and the compensation circuit, and an attenuation circuit for attenuating an output of the amplification circuit and supplying an attenuated signal to the main

converter, an attenuation factor of the attenuation circuit being determined in accordance with loads of mechanical vibration of the main converter and the compensation converter.